SAS:gte 10/23/03 4239-66898

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Date of Deposit: October 23, 2003
PATENT

Attorney's Matter No. 4239-66898

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Court et al.

Application No. To be assigned

Filed: Herewith

Confirmation No. To be assigned

For: ENHANCED HOMOLOGOUS

RECOMBINATION MEDICATED BY LAMBDA RECOMBINATION PROTEINS

Examiner: To be assigned Art Unit: To be assigned

Attorney Reference No. 4239-66898

**CERTIFICATE OF EXPRESS MAILING** 

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## INFORMATION DISCLOSURE STATEMENT FOR CONTINUING APPLICATIONS

Listed on the accompanying form PTO-1449 are several English-language documents.

Applicants respectfully request that such documents be listed as references cited on the issued patent.

The present application relies upon U.S. Patent Application No. 10/366,044, which was filed February 12, 2003, for an earlier filing date under 35 U.S.C. § 120. Furthermore, documents listed on the accompanying form PTO-1449 were disclosed to or cited by the Patent Office in the earlier U.S. application.

Copies of the documents listed on the accompanying form PTO-1449 that were cited by applicants in the earlier application need not be sent to the Patent Office pursuant to 37 C.F.R. § 1.98. However, applicants will furnish the Patent Office with such copies upon request.

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Please charge any additional fees that may be required in connection with filing this Information Disclosure Statement, or credit any overpayment, to Deposit Account No. 02-4550.

A duplicate copy of the transmittal sheet for this Information Disclosure Statement is enclosed.

The filing of this Information Disclosure Statement shall not be construed to be an admission that the information cited in the statement is, or is considered to be, prior art or otherwise material to patentability as defined in Rule 56.

Respectfully submitted,

KLARQUIST SPARKMAN, LLP

By

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# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Attorney Docket Number	4239-66898
Application Number	To be assigned
Filed	Herewith
First Named Inventor	Court
Art Unit	To be assigned
Examiner Name	To be assigned

### **U.S. PATENT DOCUMENTS**

Examiner's Initials*	Cite No. (optional)	Number	Date	Name
		5,888,732	03/30/1999	Hartley et al.
		6,355,412	03/12/2002	Stewart et al.
		6,365,408	04/02/2002	Stemmer
		6,509,156	01/21/2003	Stewart et al.

### FOREIGN PATENT DOCUMENTS

Examiner's Initials*	Cite No. (optional)	Number	Date	Country	
		WO 99/29837	06/17/1999	WIPO	
		WO 01/04288	01/18/2001	WIPO	
		WO 02/062988	08/15/2002	WIPO	
		WO 02/14495 A2	02/21/2002	WIPO	
Examiner's Initials*	Cite No. (optional)	OTHER DOCUMENTS			
		Bilello et al., Gene Therapy 10:733-749, 2003  Capecchi, M., "Altering the Genome by Homologous Recombination," Science 244: 1288-1292, June 1989.  Cho et al., "δ-Integration of endo/exo-glucanase and β-glucosidase genes into the yeast chromosomes for direct conversion of cellulose to ethanol," Enzyme and Microbial Technology 25: 23-30, July 1999.			
		Copeland et al., "Recombineering: a powerful new tool for mouse functional genomics,"  Nat. Rev. Genet. 2: 769-779, 2001.			

EXAMINER	DATE
SIGNATURE:	CONSIDERED:

<sup>\*</sup> Examiner: Initial if reference considered, whether or not in conformance with MPEP 609. Draw line through cite if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Court et al., "Genetic Engineering U Genet.36: 361-388, 2002.	Ising Homologous Recombin	nation <sup>1</sup> ," Annu. Rev.	
Cox, "Recombinational DNA Repair Annu. Rev. Genet. 35: 53-82, 2001.	Cox, "Recombinational DNA Repair of Damaged Replication Forks in Escherichia coli," Annu. Rev. Genet. 35: 53-82, 2001.		
Ellis et al., "High efficiency mutage		_	
using single-stranded oligonucleotid			
Harfe and Jinks-Robertson, "Misma	tch repair proteins and mitot	ic genome stability," Mut.	
	Res. 451: 151-167, 2000.  Higgins et al., "A Model for Replication Repair in Mammalian Cells," J. Mol. Biol. 101: 417-425, 1976.		
DNA Renaturation," J. Mol. Biol. 27	Karakousis et al., "The Beta Protein of Phage λ Binds Preferentially to an Intermediate in DNA Renaturation," J. Mol. Biol. 276: 721-731, 1998.		
adapted for recombinogenic targetin 65, 2001.			
733-744, 1998.			
<del></del>	Maas et al., "Multicopy single-stranded DNA of <i>Escherichia coli</i> enhances mutation and recombination frequencies by titrating MutS protein," <i>Molec. Microbiol.</i> 19: (3) 505-509, 1996.		
Minuyappa et al., "The homologous 261: 7472-7478, June 1986.	Minuyappa et al., "The homologous recombination system of phage λ," J. Bio. Chem.		
Moerschell et al., "Transformation of yeast with synthetic oligonucleotides," <i>Proc. Natl. Acad. Sci. U.S.A.</i> 85: 524-528, 1988.			
Murphy, K.C., "Use of bacteriophage λ recombination functions to promote gene replacement in Escherichia coli," J. Bacteriol. 180: 2063-2071, 1998.			
Murphy et al., "PCR-mediated gene 2000.	Murphy et al., "PCR-mediated gene replacement in Escherichia coli," Gene 246: 321-330,		
	Muyrers, et al., "Point mutation of bacterial artificial chromosomes by ET recombination," <i>EMBO Rep.</i> 1: 239-243, 2000.		
Muyrers et al., "RecE/RecT and Red specifically interacting with their res			
Muyrers et al., "Techniques: Recom	Muyrers et al., "Techniques: Recombinogenic engineering-new options for cloning and manipulating DNA," <i>Trends Biochem. Sci.</i> 26: 325-331, 2001.		

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Muyrers et al., "Rapid modification recombination," Nucleic Acids Res.		osomes by ET-	
Nistala and Sigmund, "A reliable ar in PACs and BACs," <i>Uncle. Acid. I</i>	Res. 30: 10 e 41, 2002.		
superfamily of recombination protein 1999.	Passy et al., "Rings and filaments of $\beta$ protein from bacteriophage $\lambda$ suggests a superfamily of recombination proteins," <i>Proc. Natl. Acad. Sci. U.S.A.</i> 96: 4279-4284, 1999.		
Proc. Natl. Acad. Sci. USA 98 (15):	Postow et al., "Topological challenges to DNA replication: Conformations at the fork," <i>Proc. Natl. Acad. Sci. USA</i> 98 (15): 8219-8226, 2001.		
	Poteete, "What makes the bacteriophage λ Red system useful for genetic engineering: molecular mechanism and biological function," <i>FEMS Microbiol. Lett.</i> 201: 9-14, 2001.		
Reuven et al., J. Virology 77(13):74	Reuven et al., J. Virology 77(13):7425-7433, 2003		
MSH4 in meiotic cells, supporting a	Santucci-Darmanin et al., "The DNA mismatch-repair MLH3 protein interacts with MSH4 in meiotic cells, supporting a role for this MutL homolog in mammalian meiotic recombination," <i>Hum. Mol. Genet.</i> 11: 1697-1706, 2002.		
Swaminathan et al., "Rapid Enginee	Swaminathan et al., "Rapid Engineering of Bacterial Artificial Chromosomes Using Oligonucleotides," Genesis 29: 14-21, 2001.		
Vellani et al., J. Bacteriology 185(8	Vellani et al., J. Bacteriology 185(8):2465-2474, 2003		
germline transmission in transgenic <i>Biotechnol.</i> 15: 859-865, 1997.			
	Yu et al., "An efficient recombination system for chromosome engineering in Escherichia coli," <i>Proc. Natl. Acad. Sci. USA</i> 97: 5978-5983, 2000.		
Zhang et al., "A new logic for DNA Nat. Genet. 20: 123-128, 1998.	Zhang et al., "A new logic for DNA engineering using recombination in Escherichia coli," Nat. Genet. 20: 123-128, 1998.		
Zhang et al., "DNA cloning by hom Biotechnol. 18: 1314-1317, 2000.	Zhang et al., "DNA cloning by homologous recombination in Escherichia coli," <i>Nat. Biotechnol.</i> 18: 1314-1317, 2000.		

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